Rice University
Department of Psychology

# PSYC 464/664: Usability Assessment Spring 2019

T-Th 9:25-10:40 SH 303

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Office Hours Tuesday 2:00-3:00 or by appointment

**Required Texts:**

Kortum, P. (2016). *Usability Assessment: How to measure the usability of products, services, and systems*. HFES Press.

Other assigned readings will be posted on Canvas (C).

**Learning Outcomes:** At the end of this course, students will:
1) Be versed in the metrics used to assess usability in the laboratory and the field
2) Be able to perform expert (non-user-based) usability evaluations on systems
3) Be able to construct a valid usability testing plan, including participant recruitment
4) Be able to perform full-scale user based usability assessment in the lab and field
5) Be able to report the results of all assessments using industry standard methods
6) Have a clear understanding of methods used in special usability assessments for medical devices, web services and persons with disabilities

| Lecture | Week | Topic | Readings |
|---|---|---|---|
| 1 | 1/8 | *No class – Instructor at conference* | |
| 2 | 1/10 | What is Usability? Introduction, Class logistics, and motivations for the course | UA: 1A, 1B |
| 3 | 1/15 | *No Class – Instructor at NSF Panel* | |
| 4 | 1/17 | Dangers and myths of usability.<br>Why assess usability?<br>*Team formation* | UA 1C, 2, 3A<br>C: Scott<br>C: Molich<br>C:Greenberg |
| 5 | 1/22 | Project Selection | |
| 6 | 1/24 | Defining your user<br>*Presentation topics due* | UA: 3B, 3C |
| 7 | 1/29 | Non-User assessment methods: Heuristics | UA: 3D<br>C: Nielsen |
| 8 | 1/31 | *Exercise: Heuristic of your device* | |
| 9 | 2/5 | Non-user assessment methods: Cognitive walk through<br>*Presentations begin* | UA: 3E, 3F<br>C: Warton<br>C: Spencer |
| 10 | 2/7 | ***No class – Midterm Recess*** | |

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|---|---|---|---|
| 11 | 2/12 | *Exercise: CWT of your device* | |
| 12 | 2/14 | Usability Metrics: ISO 9241-11 | UA: 4A<br>C: ISO9241 |
| 13 | 2/19 | Usability Metrics: Other measures and issue based metrics | UA: 4A |
| 14 | 2/21 | Usability Testing Plan<br>Test environments | UA: 4, 4B |
| 15 | 2/26 | Test timing<br>Testing tools: logging tools and surveys<br>IRB | UA: 4C, 4D, 4E, 4F |
| 16 | 2/28 | Running a standard protocol<br>In class observation | UA: 5<br>C: Rosenbaum<br>C: Dray |
| 17 | 3/5 | Alternate protocols: Think aloud and Co-discovery<br>In class observation<br>*Test plan Due* | C: Boren |
| 18 | 3/7 | ***EXAM 1*** | |
| 19 | 3/12 | ***No class - Spring Break*** | |
| 20 | 3/14 | ***No class - Spring Break*** | |
| 21 | 3/19 | Participant debrief | |
| 22 | 3/21 | Case study: Corporate web site formative assessment<br>Case study: High Security voting Summative study | UA: 7, 8 |
| 23 | 3/26 | Reporting your results | C: NIST CIF<br>C: Voting CIF |
| 24 | 3/28 | Special usability topic: Usability through web analytics | UA: 6A<br>C: Hasan |
| 25 | 4/2 | Special topics: Usability through card sorts | C: Spencer |
| 26 | 4/4 | Special cases: Medical usability, mobile usability, remote usability | UA: 6B, 6C, 6D<br>C: Miller |
| 27 | 4/9 | Special populations: users with disabilities | UA: 6E<br>C: Jaeger |
| 28 | 4/11 | Presentations | |
| 29 | 4/16 | Presentations | |
| 30 | 4/18 | Presentations | |

**Examinations**: There will be one mid-term exam, but no final. The mid-term will be closed book/closed note and may cover any of the material assigned up to that point. This includes material from any of the assigned readings, my lecture notes, Lab tours, Lab exercises and presentations that other students have given.

**Case study Presentations**: Each student will be required to give one 10 minute presentation during the course of the semester on an applied usability paper/case study. You will select a paper from the academic literature that describes a usability assessment of a product or service. Your presentation will focus on the methods used, and your assessment of the results. Were the methods correctly applied? Are there weaknesses in the experiment? Are the results generalizable? Was the information from the test valuable in fielding the product? No report is required for this presentation, but you must supply me with a copy of the presentation material after the talk. Presentation topics are due on 1/24. Presentations begin on 2/5.

**Project presentations:** Each team will be required to give a 15 minute presentation (which includes time for questions) detailing the results of their usability assessments. These will be given to the teams that designed the products and Senior OEDK staff involved in the design. This is a presentation to your client. A rubric will be posted on Canvas. Time is an element in the presentation score.

**Participation:** A good deal of this class will entail open discussions of human factors issues of medical human factors, as well as discussions of student presentations and lab exercises. Active, thoughtful participation is expected from every student

**Evaluation:**

| | |
|---|---|
| Heuristic evaluation report | 10% |
| Cognitive Walkthrough report | 10% |
| Test plan | 15% |
| Case study presentation | 5% |
| Mid-term exam | 25% |
| Project presentation | 10% |
| Project report | 25% |

**Disabilities:**
If you have a documented disability or other condition that may affect academic performance you should: 1) make sure this documentation is on file with Disability Support Services (Allen Center, Room 111 / adarice@rice.edu / x5841) to determine the accommodations you need; and 2) talk with me to discuss your accommodation needs.

**Honor System Policy:**
As with all endeavors at Rice, you are expected to adhere to the Honor Code and follow the guidelines given in the Honor System Handbook. If you are unfamiliar with the details of this code and how it is administered, you should consult the Honor System Handbook at http://honor.rice.edu/honor-system-handbook/. Exams are given under the honor system. There is no make-up for exams, presentations or in class assignments except for urgent medical situations or pre-approved circumstances of an exceptional nature. Students are encouraged to bring any concerns involving academic integrity to the attention of the instructor.

This syllabus is only a guide for the course and is subject to change with advanced notice.